

**Method and system to deliver Authentication Authority Web services using  
non-reusable and non-reversible one-time identity codes**

**ABSTRACT:**

According to the invention, a system and a method to use Authentication Authority (AA) Web services to authenticate users using non-reusable and non-reversible one-time identity (OTI) codes are disclosed. Components of this system comprise: Gateway Authority (GA), Authentication Authority (AA), Authentication Client(AC), and Authentication Handler (AH). The function of the GA is to register, manage and delegate authentication services to AA. Furthermore, the GA is also responsible for describing and publishing its AA Web service to the industry's Web Service Registry. The function of the AA is to register, manage and authenticate user's identity. The function of the AC is to generate OTI codes on the client's machine and send these codes to the business application server for authentication. The function of the AH is to enable the business application server to process OTI codes, compose authentication requests, and communicate with the AA to authenticate users.

OTI codes are generated by a set of non-reversible hash and modular math operators. A salient feature of the OTI code is that this code can only be used once. Another important feature of the OTI code is that it contains information of user identities without the risk of exposing these identities when transmitted over the Internet. This feature is the essence of the AA Web service system, which enables the identification and validation of user information in a secure manner.